

**IN THE SPECIFICATION**

**Please amend the Specification as follows.**

**Please replace Paragraph [0001] on page 1 of the application with the following new paragraph.**

[0001] This invention relates generally to ~~the~~ assessing the quality and cost of inspections. More specifically, the present invention is directed to a method, system, and software for factoring costs associated with inspection levels and results for assessing and optimizing the overall cost associated with inspections.

**Please replace Paragraph [0002] on page 1 of the application with the following new paragraph.**

[0002] Controlling the number of product defects has become an important part of managing the costs and efficiencies associated with manufacturing and distribution processes. Inspection is often used to measure the variation in products as a method to control the number of escaping defects. Unfortunately, inspection is often an imperfect and sometimes expensive process. Product measurements are often corrupted by noise introduced by the measurement or gaging process. Furthermore, there is a lack of systems for evaluating and managing an inspection process so as to trade off the costs of inspection, re-inspection, scrap/rework of products identified as defective and the often large costs associated with escaping defects.

**Please replace Paragraph [0011] on page 3 of the present application with the following new paragraph.**

[0011] In yet another aspect, the present invention provides a computer readable data storage medium having program code recorded thereon for assessing the cost tradeoffs associated with performing inspections, the program code causing a computing system to perform steps comprising: determining measurement variations and product characteristic variations to define an inspection plane; dividing the inspection plane into a plurality of

regions corresponding to respective different outcomes resulting from an inspection process; determining the probability of each outcome based on the probability mass in each region of the inspection plane, wherein the probability mass is determined based on the joint probability density of the measurement variation and the product characteristic variation; associating costs to various outcomes based on the inspection process; and computing overall costs of the inspection process by using the associated costs and the determined probability of each outcome based on the region of the inspection plane.[[.]]

**Please replace Paragraph [0044] on page 9 of the application with the following new paragraph.**

[0044] FIG. 10 shows a table **1001** that illustrates the effect of setting inspection limits so that only a few bad products escape. In this case, where the gage is relatively noisy (40% gage R&R), as much as 17% of the good product is rejected. ~~Scraping~~ Scrapping or reworking this much good product may be expensive.